UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,829	01/26/2001	Steven V. Kauffman	STL000046US1	2858

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EXAMINER
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ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 05/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
> THE MAILING DATE OF THIS COMMUNICATION.
> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
>   after SIX (6) MONTHS from the mailing date of this communication.
> - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
> - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
> - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
> - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
>   earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-39* is/are pending in the application.

> 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-39* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

> Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

> If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

> a) ☐ All b) ☐ Some * c) ☐ None of:
>
> 1. ☐ Certified copies of the priority documents have been received.
>
> 2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
>
> 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
>
> * See the attached detailed Office action for a list of the certified copies not received. ·

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

> a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claims 1-39 are pending in this Office Action.

Information Disclosure Statement

The information disclosure statement filed in Paper No. 2 has been considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

publication, "Logical Information Modeling of Web-Accessible Heterogeneous Digital

Assets," Shah et al., Proceedings of the 1998 IEEE International Conference on

research and Technology Advances in Digital Libraries, April, 1998, USA, pages 266-

275, hereinafter "Shah" in view of U. S. Patent No. 6,311,194 issued to Sheth et al.,

hereinafter "Sheth".

With respect to claim 1, Shah teaches a method of creating a database (page

268; Fig. 1, col. 1, par. 3; "Metabase" that stores persistent RDF or Resource

Description Framework objects is a database) in a data store connected to a computer,

the method comprising:

receiving a system description (Page 268; Fig. 1, "Encapsulator" receives the

web information artifacts, processes and models the artifacts into RDF objects; see col.

1, 2nd par., RDF objects are system descriptions) of a structure of the database to be

created;

generating the structure (Fig. 2 and Fig. 3; MREF, as described in page 270, col.

1, par. 1, and in col. 2, par. 3, is considered the structure as claimed) for the database

based on the system description; and

generating system descriptions, wherein the descriptions are stored and located

(the Metabase provides a level of abstraction for searching the Web; page 270, col. 1,

Par. 3-5; in par. 3: "...search engines try to impose some sort of an order by building

indices on top of the web artifacts ...").

In Shah, the RDF objects are used to present information at a higher semantic

level in conjunction with known standards such as XML. MREF layer that sits on top of

the RDF layer (see page 270, col. 2, Fig. 3) enhances the abstraction of information in

terms of location and media independence. Shah does not explicitly indicate that the

Metabase is a "custom database" and also in the step of "generating a search engine

based on the system description, wherein the search engine stores and locates data in

the custom database" does not explicitly indicate that the data stored in the metabase is

being utilized for "generating a search engine" as claimed.

Shah, in page 270, col. 1, par. 3, discusses the role of a Web crawler and/or a

search engine to utilize an index that should be built on top of the web artifacts. To

facilitate searching of information artifacts that are coming from a plurality of

heterogeneous sources, Shah suggests a location-independent, media-independent

and content-dependent method of correlating resources (page 270, col. 1). Then Shah

teaches MREF that can be stored in and supplied by a separate and dynamically

constructed metadata directory (page 272, col. 2, par. 1 and 2).

Therefore, as to the step of "generating a search engine based on the system

description, wherein the search engine stores and locates data in the custom database",

Shah does not explicitly indicate that the metabase is a custom database.

Sheth teaches a similar metabase (see abstract, col. 4, lines 55) in conjunction

with a WorldModel (col. 4, lines 64-67) that provides the customization (col. 8, lines 57-

58) sought by the claimed invention.

Sheth discloses the extraction of XML assets from and send the assets to a

Metabase Agent. Sheth's extraction of XML assets is similar to the generation of MREF

objects in Shah (see Sheth Fig. 6, col. 10, lines 43-55).

With respect to claim 1, it would have been obvious to a person of ordinary skill

in the art at the time the invention was made to combine Shah and Sheth because : (i)

both Shah and Sheth are analogous art and have a common author, Sheth; (ii) the

combination Shah and Sheth would have facilitated a better semantics between various

heterogeneous information sources of the Web (col. 4, lines 46; Sheth), and (iii) the

combination would have improved the scalability of a system that deals with

heterogeneous information sources (col. 4, lines 33-44; Sheth). In other words, both

Shah and Sheth teach the extraction of information from heterogeneous resources,

however, the incorporation of Sheth in Shah would have facilitated the formation of a

custom database because Sheth is explicit about the necessity of customizing the

extracted information according to users' needs (see ***Sheth, col. 8, lines 56-58***).

As to claim 2 (the method of claim 1, further comprising generating a user

interface to access the custom database), Shah teaches the generation of user

interface (page 270, col. 2, 3rd par. "MREF template"; page 272, col. 2, par. 1).

As to claim 3 (the method of claim 1, further comprising modifying the system

description and generating a new structure and search engine that are transparent),

Shah generates a search engine that is transparent because Shah teaches the

independence of locations and media (page 270, col. 1, par. 5).

As to claim 4 (the method of claim 1, wherein the system description defines a

mapping of one or more abstract objects to a physical representation in the structure of

the custom database), Shah teaches mapping (page 270, col. 2, 3rd par.).

As to claim 5 (the method of claim 1, wherein the structure stores data to form a

relational database) Shah teaches relational databases (page 267, col. 2, par. 3).

As to claim 6 (the method of claim 1, wherein the system description comprises a

markup language file), Shah teaches the use of XML (page 270, col. 2, par. 2).

As to claim 7 (the method of claim 6, wherein the markup language file

comprises an extensible markup language (XML) document, see Shah, page 270, col.

2, par. 2).

As to claim 8 (the method of claim 7, wherein the XML document is created using

a text editor), Sheth teaches a means that is equivalent to a text editor in Fig. 7-9, and

in col. 11, line 57 through col. 12, lines 9; "ability to modify extracted text (append, prepend, replace))".

As to claim 9 (the method of claim 7, wherein the XML file is created using a graphical user interface), Fig. 6-9 in Sheth and page 271-272 of Shah show XML files.

As to claim 10 (the method of claim 1, wherein the search engine locates data within the custom database.

As to claim 11 (the method of claim 1, wherein the search engine comprises a text search engine), Shah teaches a search engine that implements keyword search (page 270, col. 1, par. 3).

As to claim 12 (the method of claim 1, wherein the search engine comprises a high level language) and claim 13 (the method of claim 12, wherein the high level language comprises Java), Sheth teaches that the software components such as Metabase Agent, Extractor, Web crawler may be implemented utilizing JAVA programming language (Sheth, col. 17, lines 23-25).

Each of the limitations recited in claims 14-39 have been addressed in details in the rejection of claim 1-13. Claims 14-26 are essentially the same as claims 1-13 except that they set forth the claimed invention as an apparatus rather than a method. Claim 14 is directed to a computer that is capable of executing a program that, when executed, performs the steps of claim 1. Software can be loaded in a general-purpose computer to program it and to turn it into a specific machine. Once the software is loaded and the program is executed, the computer is capable of performing the steps

of a method as per program instructions. Claims 14-26 are therefore rejected for the same reasons as applied to claim 1-13 above.

Claims 27-39 are essentially the same as claims 1-13 or 14-26 except that they set forth the claimed invention as a computer program product rather than a method or apparatus. Claim 27 is directed to an article of manufacture or a computer program product that can be loaded in a in a general-purpose computer to program it and to turn it into a specific machine. Once the software is loaded and the program is executed, the computer is capable of performing the steps of a method as per program instructions. Claims 27-39 are therefore rejected for the same reasons as applied to claim 1-13 above.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 6,510,434 issued to Anderson et al.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hosain T Alam whose telephone number is (703) 308-6662. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703) 305-4393. The fax phone numbers for

the organization where this application or proceeding is assigned are (703) 308-6606 for

regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305 3800.

The following contact numbers may also be used:

TC 2100 After Finals number is 703-746-7238

TC 2100 Official Fax number is 703-746-7239

TC 2100 Customer Service Center is 703-746-7240

Hosain T Alam
Primary Examiner
Art Unit 2172

May 8, 2003